

disci of the species of *Meyenia* (*Ephydatia*), and in the same way that between the coating-spicules of the species of *Spongilla*. In both cases this tissue, consisting of air-chambers, acts as a hydrostatic apparatus, which has attained its most powerful development in the two European species—*Sp. fragilis* and *Trochospongilla erinaceus*.”

XXXIX.—*The Polyzoa of the Adriatic: a Supplement to Prof. Heller's 'Die Bryozoen des adriatischen Meeres,' 1867.*
By the Rev. THOMAS HINCKS, B.A., F.R.S.

[Concluded from vol. xvii. p. 271.]

[Plate IX.]

SCHIZOPORELLA, Hincks (*continued*).

Schizoporella vulgaris, Moll.

? *Lepralia Botterii*, Heller, Bryoz. d. adriat. Meeres, p. 30, pl. ii. fig. 4.

? *Lepralia Stossici*, *ibid.* p. 31, pl. ii. fig. 7.

I do not venture to refer Heller's two species noted above with certainty to the well-known *S. vulgaris* of Moll in the face of the figures which he has given of them; but his descriptions apply for the most part to the latter form, and I think it more than probable that we have only to do with a single species. The neck-like prolongation of the upper part of the zoecium which is shown in the figure of *L. Botterii* is certainly not characteristic of *S. vulgaris*; but there is no reference to it in the diagnosis; the cells are described as "oval, moderately convex, smooth." The present species seems to be common in the Adriatic and could hardly have escaped notice.

Primary cell ovate, smooth, with an oval aperture occupying the upper part of the front, set round with spines, of which the one in the centre of the lower margin is taller than the rest, slender, and bent inward over the opening.

Range. Britain (chiefly south and west); Ireland (west coast); Naples; Madeira.

Schizoporella Cecili, Audouin.

? *Lepralia Perugiana*, Heller, *op. cit.* p. 26, pl. ii. fig. 10.

I should unhesitatingly identify Heller's *L. Perugiana* with

the present species had he not described the oral sinus as being frequently occupied by a small avicularium *. No such structure has been noticed in the case of *S. Ceciliæ*; but the resemblance between his form and the latter is in other respects so striking that it would be difficult to regard them as specifically distinct.

Range. Britain (south-west coast and Channel Islands); Mediterranean; Australia; Queen Charlotte Islands: Red Sea and Japan (*vide* Waters).

Schizoporella discoidea, Busk.

In specimens from the Adriatic the small avicularium on the front of the cell is sometimes replaced by a long spatulate form. The dependent lateral appendages were not noticed.

Range. Britain (south and west and Shetland); Ireland (west coast); Algiers; Madeira.

Schizoporella sanguinea, Norman.

Of very common occurrence. Avicularia are frequently wanting altogether; when present they are rather small, suberect with a pointed mandible, placed close to the orifice on one side, about on a line with the lower margin, directed obliquely upward; or in the corner at the top of the cell on a line with the upper margin of the orifice, either on one side or on both. Occasionally two or three are present on the front wall of the cell. The cells are invested with a strong epithelial covering, and the surface of the zoarium has a bright and varnished appearance.

Range. Britain (south-west and Channel Islands); Naples; Madeira; Florida; Queen Charlotte Islands.

Schizoporella linearis, Hassall (unarmed var.).

A variety of this common species occurs which is quite destitute of avicularia; in other respects it seems to agree with the normal form. The species is included in Heller's list.

SCHIZOTHECA, Hincks.

Schizotheca fissa, Busk.

Range. Britain (south-west and Channel Islands); Ireland (west coast); Naples.

* "Durch ein kleines gelbes Zähnchen (avicularium) ausgefüllt."

Family Escharidæ (part.), Smitt.

LEPRALIA, Johnston (part.).

Lepralia foliacea, Ell. & Sol. (sp.), var. *bidentata*, M.-Edw.
The variety is not mentioned by Heller.

Lepralia complanata, Norman. (Pl. IX. fig. 4.)

Membranipora Smittii, Manzoni, Bryoz. foss. Ital. Contr. iv. pt. 2, pl. iii.
fig. 16.

Micropora complanata, Hincks, Brit. Mar. Pol. p. 175, pl. xxiii.
figs. 8, 9.

This species is wrongly referred to the genus *Micropora* in my 'History Brit. Mar. Pol.' The cells are surrounded by strongly-marked raised lines, but they do not exhibit any of the essential characters of the *Membraniporine*. There is no depressed area; the structure is in all respects that of a typical *Lepralia*. The specimens from the Adriatic, which are in fine condition, resemble the form described by Manzoni from the Italian Tertiaries in having an elongate marginal callosity on each side, extending downwards for some distance from the inferior margin of the orifice. This is a striking feature, and there is scarcely a trace of it in British examples. The orifice exhibits the shape which is characteristic of the restricted genus *Lepralia*.

Range. Italian Tertiaries; Great Britain.

SMITTIA, Hincks.

Smittia trispinosa, Johnston, form *spathulata*, Smitt.
(Pl. IX. figs. 3.)

Escharella Jacotini, var. *spathulata*, Smitt, Flor. Bryoz. pt. 2, p. 59,
pl. x. fig. 200.

Zoecia ovate, quincuncial, very moderately convex (not deeply sutured), punctured round the margin; surface granular or roughened, in some states punctate, commonly invested with a lustrous epithelial covering, no marginal lines; orifice (secondary) elongate, orbicular above, produced below into a pointed spout-like sinus; peristome much elevated, thin, rising into a prominent point on each side at the entrance of the sinus; two or three marginal spines; a central denticle, usually small and square-topped, on the primary margin within the sinus, and two lateral projections. *Avicularia* usually numerous and multiform; frequently a small one with pointed mandible immediately below the sinus or

occasionally within it; a very long subspatulate appendage, originating at the side of the orifice and stretching down two thirds or more of the cell, mandible of very delicate material, slightly spatulate; commonly on the opposite side of the cell, a very slender elongate avicularium of much smaller size, with an attenuated mandible; often a small form with very slender pointed mandible at the side of the orifice near the top, replaced sometimes by a pair (with triangular mandible) placed one on each side and directed inwards. *Oæcium* sub-orbicular, much depressed, thickly covered with small punctures, and with a smooth line round the base.

Professor Smitt has described this form from the Floridan seas, ranking it under his *Escharella Jacotini* (= *Smittia trispinosa*, Johnston) as a variety. I have taken the same view of it *; but I confess that an examination of specimens from the Adriatic, where it seems to be common, has somewhat shaken my previous opinion. *S. trispinosa* is undoubtedly a very variable species, but the present form seems to be differentiated from the type by characters of some significance. As it occurs in the British seas it is furnished with only two kinds of avicularium—one small and oval in shape, which is usually placed at the side of the orifice, though occasionally distributed irregularly and profusely over the zoarium, and the second larger, with an elongate triangular mandible variously situated. The var. *spathulata* is remarkable for the diversity of structure which the avicularian appendage exhibits; no less than two or three very distinct modifications occur, of which the most marked is the large spatulate form. This is present in great numbers and very materially affects the appearance of the species. The small avicularium, with very finely pointed mandible below or within the sinus, is also a notable character (Pl. IX. figs. 3, 3a). The orifice in the specimens from the Adriatic differs in some degree from that of our British form, so far as I have observed it, being commonly more elongate. The oæcium is very much depressed, almost level with the general surface; the small group of somewhat pyriform openings in the centre of the front wall, which is so characteristic of the British form, is wanting, and the surface is thickly covered with minute punctures. It may be added that the yellow colouring of the crust by which the species can usually be distinguished at once, and which is not evanescent, is absent.

On the whole, it will probably be safer to refer the present form to *S. trispinosa*, of which it must be accounted a very

* Ann. & Mag. Nat. Hist. for October, 1884, p. 232, pl. ix. fig. 4.

distinct and curious variety. This species is not noticed by Heller, nor is it included in Waters's Naples Catalogue.

Range. Florida; Port Phillip Heads, Victoria.

RHYNCHOPORA, Hincks.

Rhynchopora bispinosa, Johnston.

Range. Britain; Australia; South Australian Tertiaries.

RETEPORA, Imperato.

? *Retepora cellulosa*, Smitt.

Heller records *R. cellulosa* as occurring in the Adriatic; but judging from his brief description it is difficult to determine the form which he had in view. The only species contained in Dr. Pieper's collection I believe to be the true *R. cellulosa* of Smitt, which occurs both in the Scandinavian seas and in the Mediterranean. It is very desirable that this specific name, which has been variously applied by the earlier writers, should be used at last in a definite sense, and we cannot do better than restrict it to the present form which has been so thoroughly characterized by Prof. Smitt in his classical monograph on the Northern Polyzoa.

Family Celleporidæ.

CELLEPORA (part.), Fabricius.

Cellepora avicularis, Hincks.

Range. Britain; Arctic seas; coast of North America; Naples.

Cellepora sardonica, Waters.

Range. Naples.

Cellepora retusa, Manzoni, var. *caminata*, Waters.
(Pl. IX. fig. 5.)

Hab. Forming small globular masses on weed.

The form recorded by Waters in his Naples Catalogue under the name *C. retusa*, var. *caminata*, occurs in the Adriatic. He subsequently identified it with *C. costata*, MacG.*, and more recently has placed amongst its synonyms *C. globularis*, Bronn, and *C. rota*, MacG. I have not Manzoni's 'Castrocaro' paper, in which *C. retusa* is described, at hand, and accept the identification of the Naples and Adriatic form with it on Mr. Waters's authority. It seems to

* "Bryozoa from Aldinga, &c. South Australia," Quart. Journ. Geol. Soc. Aug. 1885, p. 303.

me doubtful whether MacGillivray's *C. costata* is the same thing. The description of the ovicell as "small" and "globular" could certainly not be applied with any accuracy to that of *C. retusa*, var. *caminata*. *C. rota*, MacG., is probably the present species; but judging from Manzoni's description and figures ('Bri. foss. del Mioc. d'Austr.' &c.), I should certainly not have suspected any very close relationship between it and *C. globularis*, Bronn. Of course if Mr. Waters were right in regarding them as the same species, Bronn's name must be adopted. The point must be left for future settlement. The present species belongs to the same group as *C. Costazii*, Audouin, and *C. incrassata*, Lamarck. The structure of the oöcium is very similar in all of them, and they all possess the raised aviculiferous processes on the sides of the orifice. In the present form there is an additional one on the lower margin, but it is frequently absent. There is also a stout mucro on each side of the margin between the anterior and lateral aviculiferous processes. The cells are large, erect, distinct, the walls punctured and furrowed longitudinally, and the large spatulate avicularia are very numerous.

Cellepora? sp.

Zoarium erect, stem subcylindrical; *zoëcia* irregularly disposed, ventricose, erect, not prominent, surface smooth and dense, orifice suborbicular, slightly produced below into a small shallow sinus, peristome not elevated, somewhat thickened, on the lower margin a mucro (not usually much elevated), bearing on the summit a small *avicularium* with a very short subacuminate mandible; large spatulate *avicularia*, much expanded at the extremity and borne on a raised framework, scattered amongst the cells. *Oöcium* (?).

One or two small specimens only of this form have occurred. I am unable to identify it with any known species.

Suborder CYCLOSTOMATA.

There are few Cyclostomata in Dr. Pieper's collection, and none of any special interest. The following species are not recorded by Heller.

Family Tubuliporidæ.

DIASTOPORA (part.), Lamouroux.

Diastopora patina, Lamk.

The *Diastopora patina* of Heller is the *Lichenopora radiata* of Audouin (sp.)*.

* In my 'Hist. Brit. M. Pol.' p. 458, I have inadvertently identified Heller's species with the true *D. patina*.

Range. Britain; France, S.W.; North and Arctic seas; Mediterranean (Capri); Queen Charlotte Islands, North Pacific.

Diastopora sarniensis, Norman.

Range. Britain (south); Mediterranean (probably); Queen Charlotte Islands.

Family Frondiporidæ.

FRONDIPORA, Imperato.

Fron dipora verrucosa, Lamx. (sp.).

Fron dipora reticulata, Blainville, Busk.

So far as we can judge from Lamouroux's description and figures there would seem to be no important difference between his species and the *F. reticulata* of Blainville and others. If we examine a series of the common Mediterranean species we find specimens in which the fasciculi form distinct and separate projections, and others in which the fasciculated elevation is more or less continuous. In almost every specimen the latter condition exists to some extent; towards the extremities of the branches especially (though not exclusively) the fasciculi commonly form elongated prominences, whilst in other parts of the zoarium they appear as isolated protuberances; and specimens occur (undistinguishable in other respects from the above) in which the confluent or continuous arrangement of the fasciculi largely predominates. The zoecium is reticulate or simple in habit.

Range. Mediterranean; Kamtschatka and Spitzbergen (according to Lamouroux).

Suborder CTENOSTOMATA.

Family Alcyonidiidæ.

ALCYONIDIUM, Lamouroux.

Alcyonidium gelatinosum, Linn.

Range. Britain; North and Arctic Seas; North America; Queen Charlotte Islands; Natal.

Alcyonidium mytili, Dalyell.

Range. Britain; Bahusia; Jan Mayen; Baltic Sea; Naples.

Family Vesiculariidæ.

BOWERBANKIA, Farre.

Bowerbankia imbricata, Adams, form *densa*.

Abundant, growing in dense subglobular tufts.

Range. Britain; White Sea; Caspian Sea; Roscoff.

Bowerbankia caudata, Hincks.

Range. Ilfracombe.

Bowerbankia biserialis, n. sp. (Pl. IX. figs. 6.)

Erect, stems * composed of stout, cylindrical, transparent internodes of great length; at each joint two opposite branches given off, the terminal internodes tapering off to a blunt point. Zoœcia oblong, of moderate size, and about equal width throughout, subtruncate above and rounded below, sessile, transparent, arranged in two distinct series, which originate in a central cell or group of cells near the base of an internode, from which they diverge and run along opposite sides of the stem in a double row, the intermediate portion of the stem destitute of cells.

Height of specimen about an inch and a quarter.

This is an interesting form, and is distinguished from every other known Vesicularian by the peculiar arrangement of the zoœcia. Towards the base of the internode a group of cells is developed, and from this as a starting-point proceed two divergent series of cells, which traverse the opposite sides of the cylinder, to the summit of the internode. Each series is composed of two lines of cells (at least), and after reaching the side of the cylinder they run parallel to one another (Pl. IX. fig. 6), a wide space, destitute of zoœcia, lying between them. The cell is very much smaller than that of *B. imbricata*, and altogether of more delicate make. The stem is comparatively thick and the internodes of great length, so that the branching appears scanty.

Bowerbankia pustulosa, Ellis & Sol.? *Valkeria Vidovici*, Heller.

The true *B. pustulosa* occurs in the Adriatic, and I am inclined to think that Heller's species must be identical with it. The only difference between them, judging from his

* No doubt the erect shoots are developed on a creeping stolon; but in the only specimen which I have examined it was wanting.

figure, is that the groups of cells are more compact in *V. Vido-vici*, and do not extend so far down the internode as in *B. pustulosa*. In this respect it agrees with *B. citrina*, mihi, a kindred form; but as no mention is made of the remarkable colouring which distinguishes this species, we have no sufficient ground for identifying them.

Family Buskiidæ, Hincks.

BUSKIA, Alder.

Buskia socialis, n. sp. (Pl. IX. figs. 7.)

Stem erect, slender, irregularly branched, branches long and straggling. *Zoæcia* developed in groups along the stem and branches, usually separated by intervals, but occasionally almost confluent, placed on different aspects of the stem so as to surround it, comparatively large, elongate, adherent for about a third of their length, rounded off at the lower extremity, the upper surface straight for some distance above it, the anterior portion suberect and free, and closed in below by a membranous area, which extends from the point of adherence to the oral extremity; one or two adherent spinous processes given off on each side of the cell just below the area; cell elongate-flask-shaped, when the tentacular sheath and setæ are exerted (see fig. 7).

B. socialis is a much larger species than *B. nitens*, Alder, but about the same size as *B. setigera*, which I have lately described from the Mergui Archipelago. It is distinguished from its congeners by its erect and branching habit, as well as by the form and grouping of its zoæcia. The latter are elongate and are placed lengthwise upon the stem, one following the other, but not on the same aspect of it. The decumbent and adherent portion seems to be longer than in either of the other species; the anterior part slopes gradually upward, expanding towards the oral extremity (Pl. IX. fig. 7 a). The whole of the front of the cell from the point of adherence is closed in by a membranous wall. On the lower part of the stem in the specimen examined the cells form a continuous line; but generally they are associated in groups of four or five, which are separated by a distinct interval. The adherent spines round the base of the cell, which are so characteristic of *B. nitens*, are represented here by one or two short spinous processes.

The three species of *Buskia* which are now known constitute a very good representation of the generic type.

Family *Cylindræciidæ*.

CYLINDRÆCIUM, Hincks.

Cylindræcium giganteum, Busk.

Range. Britain; Naples; Queen Charlotte Islands; Merqui Archipelago.

Family *Triticellidæ*, G. O. Sars.

HIPPURARIA, Busk.

Hippuraria verticillata, Heller (sp.). (Pl. IX. figs. 8.)

Valkeria verticillata, Heller, *op. cit.* (1867).

? *Lagenella nutans* (part.), Joliet, Bryoz. des côtes de France, p. 101 (1877).

There can be no doubt that the species to which Prof. Heller has given the above name belongs to this family. At the time when his work on the Polyzoa of the Adriatic was published G. O. Sars's admirable paper on the genus *Triticella* had not appeared, and the peculiarities of the type were really unknown. The species occurs abundantly in Dr. Pieper's collection on seaweeds.

The stem is altogether repent and jointed at intervals; below each joint the stem is somewhat enlarged and is flanked on each side by a nodular swelling, from which a branch is given off. At each joint a group of cells is placed (Pl. IX. fig. 8a). The zoëcia are elongate-ovate, slightly curved outwards on one side, and on the other (the ventral) somewhat compressed and flattened. The ventral face is occupied by a membranous area, which extends from the top almost to the base of the cell, the orifice is terminal. The cells are borne on an extremely short peduncle, to which they are jointed, so as to secure a certain amount of mobility (Pl. IX. fig. 8).

The structure is altogether that of the *Triticellidæ*, and the species should probably be referred to the genus *Hippuraria*, in which the cells are aggregated in whorls (in the erect form) or in groups, as in the present case, round the nodular enlargements. In *Triticella* they are scattered singly along the stolon. It may indeed be a question whether this difference is of sufficient significance to warrant the separation of forms otherwise so closely allied; but if the genus *Hippuraria* is retained the present form must be referred to it.

The *Lagenella nutans* of Joliet obtained at Roscoff is

probably identical with Heller's species; and if so, his name must rank as a synonym*.

Group *ENTOPROCTA*, Nitsche.

Order *PEDICELLINEA*.

Family *Pedicellinidæ*, Hincks.

PEDICELLINA, Sars.

Pedicellina cernua, Pallas.

Range. Britain; North and Arctic Seas; White Sea; Roscoff; Naples.

BARENTSIA, Hincks.

Barentsia gracilis, Sars (sp.).

I have removed this species from the genus *Pedicellina* (in accordance with a suggestion made some time since †) on the ground of the localization of the muscular power concerned in the movements of the peduncle.

The form of *B. gracilis* in which the stem is much elongated, and carries one or two muscular enlargements in addition to the normal one at the base, occurs in the Adriatic ‡.

Family *Loxosomidæ*.

Loxosoma (? sp.).

A fine species occurs, clustering about a tuft of *Bugula*. The body large, rather elongate, ovate when the tentacles are retracted; buds numerous, forming two large clusters, placed on opposite sides of the body, sometimes as many as five (or more) in a cluster; stem of great length, and apparently simple at the base. The length of the stem and the profusion of the large clusters of buds are marked characteristics. The number of tentacles was not determined.

[? *L. Kefersteinii*, Claparède.]

* Joliet mentions a form as also occurring at Roscoff which is furnished with a peduncle almost equal to the cell in length; this he regards as a variety of *H. nutans*, but he supplies no sufficient description. In *H. verticillata* the peduncle is of very uniform length.

† "Contrib. Gen. Hist. Mar. Pol.," 'Annals' for May 1884.

‡ Mr. Lomas, in his Report on the "Polyzoa of the Liverpool Marine Biology Committee's District" (Proc. Lit. Phil. Soc. Liverpool," vol. xl. Appendix), distinguishes this form as var. *nodosa*.

SUPPLEMENT.

Family Membraniporidae.

Group a.

FLUSTRA, Linnæus.

Flustra tenella, n. sp. (Pl. IX. fig. 1.)

Zoecia in two layers, elongate, rectangular, narrow, margins thin and smooth, on each side a little below the top a single short acuminate spine. *Avicularia* distributed amongst the cells, placed obliquely on a small oblong area, ovate, broad and rounded below, tapering slightly upwards, elevated towards the upper (or mandibular) extremity, and depressed at the opposite end; mandible broadly triangular, bluntly pointed above. *Oecium* small and shallow, depressed and covered by the membranous cell-wall, oral arch rather prominent; the opening closed in by a membranous curtain. *Zoarium* composed of very narrow segments, expanding slightly upwards, and bifurcating frequently; the terminal segments rounded at the extremity.

This is the form which in the earlier portion of this paper I referred to *F. securifrons*, Pallas; but further examination has shown me that it is in many important particulars very distinct from that species, and must be separated from it. *F. tenella* is of very delicate habit as compared with Pallas's species, the segments of its zoarium being very much narrower than those of the latter (only about a third of the width), and wanting altogether the broad wedge-like terminations that are so characteristic of *F. securifrons*. In shape the cells of the two forms are very similar, but those of *F. tenella* are furnished with a pair of spines near the upper extremity, which are altogether wanting in the other species (Pl. IX. fig. 1). The most striking differences, however, are found in the oecium and avicularium. The oecium in *F. securifrons* is ample, projecting a considerable way into the cell above it, whilst in the present species it is insignificant in size and very shallow; in the former the opening is protected by two curious rib-like appendages (Pl. IX. fig. 2), which originate one on each side and meet in the centre; in the latter these are wanting and the orifice is simply closed by the usual membranous curtain. The avicularium of *F. tenella* is large, always placed obliquely, with a bluntly pointed triangular mandible of considerable width; that of *F. securifrons* is smaller, with a comparatively short rounded mandible,

and is set straight in the line of the cells. [Compare Pl. IX. figs. 1 a, 2 a.]

I have only had the opportunity of examining small pieces of *F. tenella* and am therefore unable to give any account of its general *habit of growth* *.

Flustra pusilla, n. sp. (Pl. IX. fig. 9.)

Zoecia in one layer, small, rounded above, the upper portion wide, narrowing off below, truncate at the base (occasionally running to a point), margin very thin, smooth, no spines. *Avicularia* distributed amongst the cells, numerous, situated on a small quadrate area, at the bottom of a cell, usually placed transversely, very regularly oval, slightly elevated at one extremity; mandible short, rounded at the top. *Oecia* (?).

Dorsal surface of the zoecia convex, smooth, sutures well-marked.

The only specimen which has occurred consists of a very small elongate segment attached to the stem of a seaweed.

F. pusilla bears a close general resemblance to *F. membranaceo-truncata*, Smitt, a common northern species; but the cells of the latter are much larger and more elongate than those of the present form, which approach the ovate type, whilst there is a striking difference between the avicularia (Pl. IX. fig. 9, compared with fig. 10). The specimen examined consists of a single lamina.

Group b.

MEMBRANIPORA.

Membranipora tenuirostris, Hincks.

Range. Madeira; Naples; Queen Charlotte Islands.

[Section AMPHIBLESTRUM.]

Membranipora patellaria, Moll, form *multijuncta*,
Waters.

Hab. On shell.

Range. Mediterranean (normal), Moll; form *multijuncta*, Naples; Victoria.

* The paragraph respecting *Flustra securifrons* in the early part of the paper must be cancelled, with the exception of the portion relating to the oecium, which must be referred to the present species.

Family Myriozoidæ (part.), Smitt.

SCHIZOPORELLA, Hincks.

Schizoporella lineolifera, Hincks.

When I characterized this species in a former part of this paper I had overlooked the fact that it had already been described by Busk in his 'Challenger' Report under the name of *S. marsupifera* *. I have no doubt of the identity of the 'Challenger' species with the form from the Adriatic, and Mr. Busk's name must therefore supersede my own. I may add that he has not noticed the stellate character of the punctures on the cell-wall, which is due to the presence of a few very minute denticles within the margin. The shape of the orifice too as shown in the 'Challenger' figure differs from that which is met with in the specimens from the Adriatic. In the latter the operculum is rather broad and arched above, and narrows off gradually to a blunt point. The orifice should rather be described as produced and pointed than as distinctly sinuated.

Range. Marion Island, 50–75 fath., on *Fucus*; lat. 39° 32' S., long. 171° 48' E., 150 fath., blue mud; Adriatic, on *Fucus*.

Beania mirabilis, Johnston.

Heller mentions this species as occurring once on an Alga at Lesina; but Dr. Pieper informs me that it is common on Algæ, shells, sponges, &c.

He also states that *Valkeria Vidovici*, Heller (? *Bowerbankia pustulosa*), is one of the most abundant of the Polyzoa of the Adriatic.

In the present Report about forty species are enumerated which are not included in Prof. Heller's work. He has recorded one hundred and five species probably distinct, making a total of one hundred and forty-five for the Adriatic.

Of those now first recorded nine are new to science; of the remainder a few, such as *Chlidonia*, *Smittia trispinosa*, *Schizoporella marsupifera*, *Eucratea chelata*, &c., have a wide distribution, or at least have occurred at isolated points remote from one another. But a large proportion of them have much the same range—from Southern Norway (or, in the case of some, from the west and south coasts of England and Ireland)

* 'Challenger' Report, p. 165, pl. xxii. fig. 14.

to the Mediterranean and Madeira. A small number occur in the Arctic seas.

It may be convenient to identify as far as possible a number of Heller's species which are probably referable to forms already described when he wrote, and to note some of the changes in the generic names:—

Scrupocellaria capreolus, H., = *S. Bertholletii*, Aud.; *Diachoris simplex*, H., = *Membranipora patellaria*, Moll (sp.); *Membranipora bifoveolata*, H., = *Micropora impressa*, Moll (sp.); *Lepralia cribrosa*, H., = *Crib. punctata*, var.; *Lepralia Kirchenpaueri*, H., ? = *L. adpressa*, Busk; *L. appendiculata*, H., ? = *C. marsupiata*, Busk; *L. Steindachneri*, H., = *Cribrilina Gattyæ*, Busk; *Eschara fascialis* = *Lepralia foliacea*, form *fascialis*; *Eschara cervicornis*, M.-Edwards, = *Smittia cervicornis*; *Discosparsa patina*, H., = *Lichenopora radiata*, Aud.; *Obelia tubuliferu*, Lamx., = *Idmonea serpens* (young); *Valkeria verticillata*, H., = *Hippuraria verticillata*.

EXPLANATION OF PLATE IX.

- Fig. 1.* *Flustra tenella*, n. sp. 1 a. Avicularium.
Fig. 2. *Flustra securifrons*, Pallas. Zoëcia magnified, to show the rib-like appendages protecting the opening of the oëcium. 2 a. Avicularium.
Figs. 3, 3 a, 3 b. *Smittia trispinosa*, Johnston, form *spathulata*, Smitt. 3 c. Spatulate avicularium.
Fig. 4. *Lepralia complanata*, Norman.
Fig. 5. *Cellepora retusa*, Manzoni, var. *caminata*, Waters.
Fig. 6. *Bowerbankia biserialis*, n. sp. An internode and its zoëcia, magnified. 6 a. Portion of stem, showing a joint and the mode of branching.
Fig. 7. *Buskia socialis*, n. sp. One of the groups of zoëcia, magnified. 7 a. A single zoëcium. 7 b. Nat. size.
Fig. 8. *Hippuraria verticillata*, Heller (sp.). Zoëcia. 8 a. A portion of the stolon, with one of the nodular enlargements from which the groups of zoëcia originate.
Fig. 9. *Flustra pusilla*, n. sp. Group of zoëcia, with avicularia.
Fig. 10. *Flustra membranaceo-truncata*, Smitt. Zoëcium with avicularium.

XL.—On the Structure of the Pseudoscorpions.

By A. CRONEBERG*.

THE circumstance that a small Pseudoscorpion, *Chernes Hahnii*, C. Koch, occurs pretty plentifully near Moscow

* From the 'Zoologischer Anzeiger,' no. 246 (March 14, 1887), pp. 147-151. A preliminary note.